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SEPTEMBER—OCTOBER 1978

Volume 69, Number 5

Seventy-five Cents

California GARDEN



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and*

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COVER: The drawing of *Scilla peruviana* 'Peruvian Bluebell' is from a collection of paintings donated to *San Diego Floral* by Kathleen Crawford. Mrs. Crawford's paintings have achieved national recognition.

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Events

- Sept 7 "THURSDAY WORKSHOPPERS"
San Diego Floral Asso. Garden Center, 10:00 a.m. to 3:00 p.m.
Call Mrs. Louis Kulot for information—222-5480
- Sept 12, 19, 26 & Oct 10 FLOWER ARRANGEMENT CLASSES with Adrienne Green
Tuesday, Casa del Prado, Room 101, 1:00 to 3:30 p.m.
Call Mrs. Roland Hoyt for reservations—296-2757
- Sept 30 BUS TOUR—HUNTINGTON GARDENS in Pasadena, California
Saturday
Call San Diego Floral Asso. Garden Center for reservations—232-5762
- Oct 7 & 8 "BEAUTY AND THE BEASTS" FLOWER SHOW
Saturday & Sunday, San Diego Wild Animal Park
Sponsored by the San Diego Floral Association
- Oct 16, 23, 30 & Nov 6 FLOWER ARRANGEMENT CLASSES with Martha Rosenberg
Monday, Casa del Prado, Room 101, 10:00 a.m. to 12 noon
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- Oct 17 SAN DIEGO FLORAL ASSOCIATION MEETING
Tuesday, Casa del Prado, Room 101, 7:30 p.m.
Program: "Succulents for your Home and Garden"
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- Oct 7 & 8 SAN DIEGO ORCHID SOCIETY FALL "MINI" SHOW
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- Oct 21 & 22 NORTH COUNTY ROSE SOCIETY'S ANNUAL ROSE SHOW
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- Oct 29 CONVAIR GARDEN CLUB CHRYSANTHEMUM & FALL VEGETABLE SHOW
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- Nov 4 & 5 SAN DIEGO TROPICAL FISH & KOI POND SHOW
Majorca Room and Patio "A", Casa del Prado, Balboa Park
Saturday 1:00 to 7:00 p.m. & Sunday 11:00 a.m. to 5:00 p.m. FREE

TRY BULBS IN CONTAINERS

by George James

BULBS CAN BE grown in containers, as well as in the garden, so one can have flowers to fill in those bare areas or brighten the home or patio when there are not many other plants in bloom. Too, they make very nice gifts for Christmas, Easter, or Mother's Day. They can be grown in a secluded location and moved when they are coming into bloom.

September is the time to start planting. Buy your bulbs early for the best selection of large firm bulbs. They are in their best condition and every week they remain unplanted after that their vigor declines. If you expect your bulbs to grow strong plants and produce large flowers they must be planted well before the Christmas rush starts. The largest size bulbs you can buy are the most satisfactory for container culture as they will have the most foliage and flowers. If you plant a succession of bulbs three weeks apart you can have flowers over a longer period



Narcissus



Parrot Tulip

of time. For a more impressive planting, crowd the bulbs as close together as possible. Leaves and flowers from single bulbs, except amaryllis, are always spindly when grown alone.

PLANTING

Bulbs may be grown in one of several media: potting soil, sand, peat moss, other inert materials, or water. Potting soil will have plant food in it that other media lack, but this can be compensated for by more frequent applications of fertilizer. Commercial potting mixes are suitable, or one can mix equal parts of good soil, peat moss (or other fine organic material), and sponge rock. Add one teaspoonful of bone meal (contains the phosphorus needed for the development of flowers) to the amount of mix needed to fill a 6-inch pot. Mix the ingredients together and moisten, but do not saturate the medium.

Use containers with drain holes. If new or dry red clay pots are used soak them in water until the bubbles stop rising. A dry clay pot will draw water

from the soil around a bulb or plant. With plastic, ceramic, metal, or wooden containers this is not a problem. Before the soil is added drain holes should be covered with a piece of screen or a shard, or stuffed with tightly rolled nylon stocking to keep the soil from plugging the holes.

Place soil in the bottom of the container, pressing and firming it to provide a base equal to two-thirds the height of the bulbs. Place the bulbs close together and then fill in the area around and between them. Firm the mix by pressing with the fingers. An inch of space should be left at the top of the pot so there is room for irrigation. Bear in mind that the bulbs will swell when wet and the roots will expand, raising the level of the soil. Water and set aside while growth begins. While some bulbs can be started under normal light conditions, daffodils, hyacinths, tulips, amaryllis, and tuberose need to be started in total darkness so they can develop a strong root system before top growth begins. If this is not done small leaves and weak flowers will develop. The pots can be placed in a closet, dark area of the garage or garden shed, or covered with inverted cartons. Pots in darkness will need to be checked from time to time to see that the soil is damp. Water requirement under these conditions is minimal so be careful that they are not overwatered. You may even bury the pots in the garden under several inches of soil or shavings. It will take from six to eight weeks for a strong root system to develop. This is best determined by holding the pot upside down and tapping it so that the ball of soil slides out intact. When the ball of soil is well netted with roots, the pots may be brought into the light to encourage growth. Different kinds of bulbs will develop at different rates, so when more than one kind is being grown, one or two pots of each should be checked to determine whether they are ready to come into the light. Pots should then be placed in a well lighted location, but not in strong sunlight, and given one application of liquid fertilizer, plus a second application just before the flowers open.

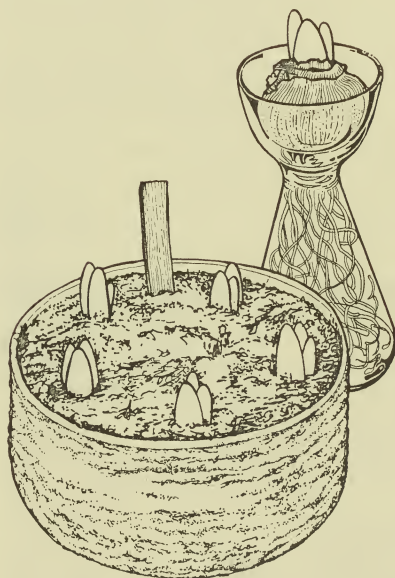
DAFFODILS

There are many varieties of daffodils so one may have variety in the flowers and a long sequence of bloom. They should be planted with the neck (thin part of the bulb) showing above the soil in the pot and started in a dark place. The large double nose bulbs will have two or three flowers each while smaller bulbs will only have one. There are usually divisions,

called slabs, attached to the base of the bulb but free otherwise, which should not be broken off. Breaking leaves a wound at the base in which decay can start.

TULIPS

Tulips should be started in darkness, but first they must be refrigerated for six to eight weeks. Store them in a vegetable compartment in plastic bags or an airtight container so they do not dehydrate while in storage. Set them in the pot so the tip of the bulb shows above the surface of the soil. Plant several bulbs to a pot to make an impressive planting.



Hyacinths may be grown in bowls or specially designed vases

HYACINTHS

Hyacinths too, need to be started in the dark and they benefit from the refrigeration described for tulips, but this treatment is not as essential for hyacinths. They are often planted one bulb to a 4-inch pot, but can be planted in clusters. These bulbs are planted with the tip showing above the soil.

Hyacinths and narcissi are the most satisfactory for growing in water. There are special vases made to hold one bulb so that its base just touches the water with room below for roots. A shallow dish may be used instead, with pebbles holding the bulbs upright. Bulbs in water should be kept in a dark place until they develop a strong root system, then brought into the light. Pieces of charcoal should be placed in the water to purify it and the water level should just reach the base of the bulb.

AMARYLLIS

Amaryllis is popular because it grows easily and has such large and showy flowers, usually before the foliage develops. Plant one bulb in a pot. These large 4- to 6-inch bulbs are set so that the neck and about half of the bulb is above the soil. The largest amaryllis bulbs may have two stems with from two to four flowers on each stem.

TUBEROSES

A tuberose will produce a spike of fragrant white flowers. Plant three tubers in a 6-inch pot with their tips above the soil. The soil in which these are planted should be fairly moist and they should not be watered unless the soil becomes very dry. When the tubers start to grow, they will need more water. Tuberoes do best in a lightly shaded place.

A FEW OTHER BULBS

Other bulbs that can be grown in containers include Dutch irises in a variety of colors; freesias in many colors, with their penetrating and pleasing fragrance; ixias (sometimes called African corn flowers) in a wide variety of colors, but always with a red center; crocuses in several colors (one of the earliest); *Scilla peruviana*, sometimes called Peruvian squill, and *S. campanula*, Spanish blue bell, with stalks of flowers, blue in color, that resemble hyacinths but are smaller; muscari, the grape hyacinth, like a miniature blue or white hyacinth; oxalis with giant shamrock foliage and white, pink, or yellow flowers.

Nearly any kind of bulb offered in the fall for spring flowering can be grown satisfactorily, for a season at least, in a container. An easy and inexpensive way to become acquainted with new kinds of bulbs is to try a few.

Bulbs grown in pots usually will not flower well a second year because the bulb is not able to mature properly in the limited root space. When they are dry shake them in a sack with fungicide and plant them in the garden. Usually a year later good flower buds will form again.

Bulbs planted in pots, with the exception of tuberoes, should be watered when planted to settle the soil and then not again until the soil starts to become dry. Keeping the soil too wet can cause the bulbs to decay. As the tops start to develop, and later the flowers, the need for water increases. If the soil becomes dry, the leaves will develop brown edges and the flowers may be damaged and malformed.

Bulbs in containers can be the answer when there isn't much room or when conditions are not right in the garden. Buy new bulbs each year for your containers. Keep a schedule of your planting and flowering dates to help guide you next year. It is an interesting and rewarding experience for both children and adults. □



Snowdrop

Photos by Barbara Jones

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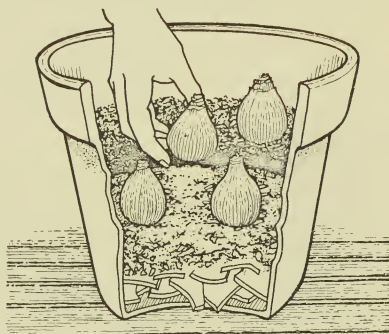
DIANTHUS, from the Early Greeks meant divine flower or flower of Zeus. "In the pink," the "pink of perfection" perhaps even pinking shears refer to this fragrant flower. According to Irish legend a fairy queen had the petals clipped to improve its appearance. It was around the 18th century pink as a color appeared in fashion news. All this from the garden pinks.

—B.K.

DAFFODILS

FOR AN ATTRACTIVE display, daffodils may be planted in a double layer.

Cover the bottom of a large container with a layer of compost. Space bulbs evenly on top of this layer, then cover them up to their noses with additional compost. Place more bulbs between the noses of the bulbs in the first layer. Cover the second layer of bulbs up to the top of their noses and—Eureka! One has more flowers for a longer period in the same space.



—S.C.

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Australia-California Poppy

CALIFORNIA NATIVES IN AUSTRALIA

by Helen Chamlee

AS A CALIFORNIA NATIVE myself I was pleased to meet other California natives, the kind having leaves and flowers, as I traveled about Australia and New Zealand. October and November, in those lands below the equator, are the months of spring, consequently my visit was a journey into springtime. The hills were green, the California poppies in full bloom.....what am I saying? Yup, California poppies.

The corner of Australia which I visited—the Sydney, Canberra, Melbourne corner—has a climate much like that of southern California, and its farms and gardens are much like ours; grainfields, vineyards, citrus, cattle—all of these plus sheep, millions and millions of sheep.

It looks like California too, but in reverse—all the wild forest trees are eucalyptus and all the planted forests are of pines, California pines at that. Our native Monterey pine, *Pinus radiata*, has proved to be the most satisfactory timber tree in both Australia and New Zealand. Monterey pines under cultivation there grow to a diameter of 24 inches, a merchantable size, in 25 years.

Experimentation goes on with pines of other species and with hybridization and selection. In Canberra I visited a forest experiment station, where many kinds of American and European pines are planted out in blocks for evaluation. Perhaps one day a more satisfactory pine than the Monterey will be found, but in the meantime these California natives are out front for production of lumber and pulp.

While it is true that some species of eucalyptus are used in Australia to make lumber, and very superior lumber, they grow too slowly to be practical for tree farming. One hundred years or more is too long to wait, when another kind of tree will make a crop in 25 years. The well known eucalyptus bubble in California burst because the fast growing species we planted here were not the right kind for making good lumber.

As one would expect, the great botanic gardens in Sydney and Melbourne, both of them more than

100 years old, have made full use of American as well as European, Asian, and African trees.

As I walked around in the rain through Sydney's botanic garden I kept meeting old friends. There were sequoias, California fan palms, Monterey cypresses, our very own Torrey pines, and California big trees, all of great size. Other native Americans familiar to us as park and street trees were magnolia, liquidambar, bald cypress, and coral trees.

The skyline of Sydney is characterized by Mexican fan palms, native to Baja California, and Norfolk Island pines (star pines), native to a speck of an island in the Pacific between Australia and New Zealand. These two trees are conspicuous on California skylines also, particularly in older sections of our cities, where they are holdovers from the days when gardens were large enough to accommodate such large trees.

Traveling from Sydney to Canberra by train, I found myself thinking I was never going to see any Australian wildflowers, but I did feel right at home. They have the same weeds we have! Dandelion, European buttercup, mustard, dock, plantain, wild oats, fennel, blackberries, on and on. Then suddenly, beside the track and off into the wheat fields, there was the unmistakable glowing orange of California poppies, lots and lots of poppies. They have naturalized here as they have in comparable situations in New Zealand, also in Chile, I am told.

In this part of New South Wales there is one kind of "weed" I could wish we did have here in California—the apple tree! Beside the track, in the ditches and along fences, apple trees stood by the hundred, in full spring bloom.

In Canberra, the capitol city, I spent several days driving with a friend or walking around the city, simply breathing in the beauty of it. At the end of an unusually long and cold winter everything had burst into bloom at once. Flowering trees and shrubs, annuals and perennials, bulb flowers, all glowing like polished jewels against the new leaves of the many deciduous trees. Those leaves are a fresh and delicate green we seldom see here, where evergreen trees are the backbone of all plantings.

California poppies were in those gardens too, the familiar single golden cups of the wild ones, also some bicolored and ruffled ones in red, pink, and cream. (We can buy seed for these here, why not try

some for next spring?) In many gardens I saw also the blue of our native *ceanothus*.

Canberra has a great botanic garden and what do you think is grown there? Native plants. Australian natives. Australia is a huge country, extending from tropical to lowtemperate zones, with every kind of habitat from rain forest to some of the driest deserts on earth. The purpose of the garden is to propagate and grow in this one place all of the native plants that can be made to grow here. An ambitious undertaking, considering that more than 10,000 species are known in Australia. It was interesting to see so many of our popular garden plants, acacia, bottlebrush, grevillea, flowering eucalyptus, and others, on their native soil.

I was fortunate to be in Canberra the weekend of the National Wildflower Festival, an event I had never heard of and one that apparently is not considered an "attraction" as it wasn't mentioned in any promotional brochures, but naturally it attracted me. A comparable event here would be a flower show with material being flown in from Maine, Minnesota, Texas, Hawaii, and all the other states. One of the rules for this show is thought-provoking: every one of the flowers or plants shown must be a cultivated specimen. No one is going out picking the only bloom of a rare orchid to put on exhibit.

I mustn't forget to mention this: there are no billboards in Canberra.

In the city of Melbourne, on the south coast, the botanic garden is part of a huge complex of parks, gardens, historical monuments, government house grounds, and a landscaped riverside drive. English and Scottish settlers, with a long tradition of gardening behind them, early laid out their cities with botanic gardens so that now we see mature trees and great shrubs, 20-foot rhododendrons for example, the result of many decades of growth.

Melbourne's botanic garden was laid out in the English landscape style developed in the eighteenth century, with vast sweeps of lawn, groves of trees, winding paths, streams and ponds. The ponds are home to swans and other waterfowl, and all the swans are black swans, native to Australia.

The largest tree in the Royal Botanic Garden is a magnificent specimen of a California native, the Monterey cypress. Its spread of more than 80 feet and its massive buttressed trunk are outstanding even in this landscape distinguished by great trees. □



Spray of Bougainvillea "San Diego Red"

bougainvilleas

by Virginia Carlson

"The Flaming Beauties"

BOUGAINVILLEAS—VINES, SHRUBS, OR ground covers? Actually they can be used in all three ways and as container or basket plants as well. Another use is on a covered walk or pergola, where the vine is trained up as a standard for 6 or 7 feet, then permitted to branch out.

Found as woody vines in tropical South America, there are several colors and forms. Flowers are inconspicuous, usually three in a cluster, opening one at a time, all surrounded by three showy bracts. Colors may be white as in 'Jamaica White' or 'White Madonna,' pale yellow in 'California Gold,' shades of

sunset from rose to yellow-orange in 'Afterglow,' brilliant orange as in 'Isbell Greensmith,' or mauve as in 'Lavender Queen.' In addition to the brilliant red of 'Barbara Karst' or of 'Mrs. Butt,' commonly sold as 'Crimson Lake,' there is a delicate rose called 'Pink Tiara.'

The above named are vigorous, upright growers. 'San Diego Red' is one of the finest, holding its foliage well even in cooler climates and blooming over a long period of time.

Shrub-like types which can be pruned for smaller areas or for growing as shrubs are the magenta-purple 'Convent'; 'Crimson Jewel,' which is fine for a ground cover as it likes to sprawl; 'La Jolla,' a more compact plant, bright red; and 'Temple Fire,' which grows to 6 feet and loses its leaves in cold weather. Its bracts are bronzy-red.

A dwarf, 'Raspberry Ice,' has variegated foliage with fuchsia-red bracts and grows from 3 to possibly 6 feet. Planted in a container and trained on a trellis, it can aptly be called a miniature bougainvillea. A number of new cultivars are now becoming available; one is 'Tahiti Girl' with its brilliant rose bracts and green leaves.

Bougainvilleas require full sun near the coast but may like a little shade in the hot inland areas.

They are not fussy as to soil, but it should be well-drained. They can be fertilized occasionally and should be watered regularly. Plantings should be made in early spring to give the plant a long season in which to become established. Where frost threatens, they should be given a protected area. Plants two or three years old will come back even if nipped by frost.

Extreme care must be taken when planting a bougainvillea, so that the root ball does not fall apart. Suggested methods: slit the sides of the can and plant can and all, punch many holes around the bottom of the can before planting, or cut out the bottom of the can and plant. The can will disintegrate surprisingly fast.

Bougainvilleas can be pruned hard after frost to maintain shape or to direct their growth. If staked, they must be strongly supported as they become very heavy. Unstaked and left to sprawl, they will cover a rather large area.

Take care in choosing your colors for they can clash with other plants nearby and, with their spiny stems and touchy root systems, you will not want to even try to transplant them.

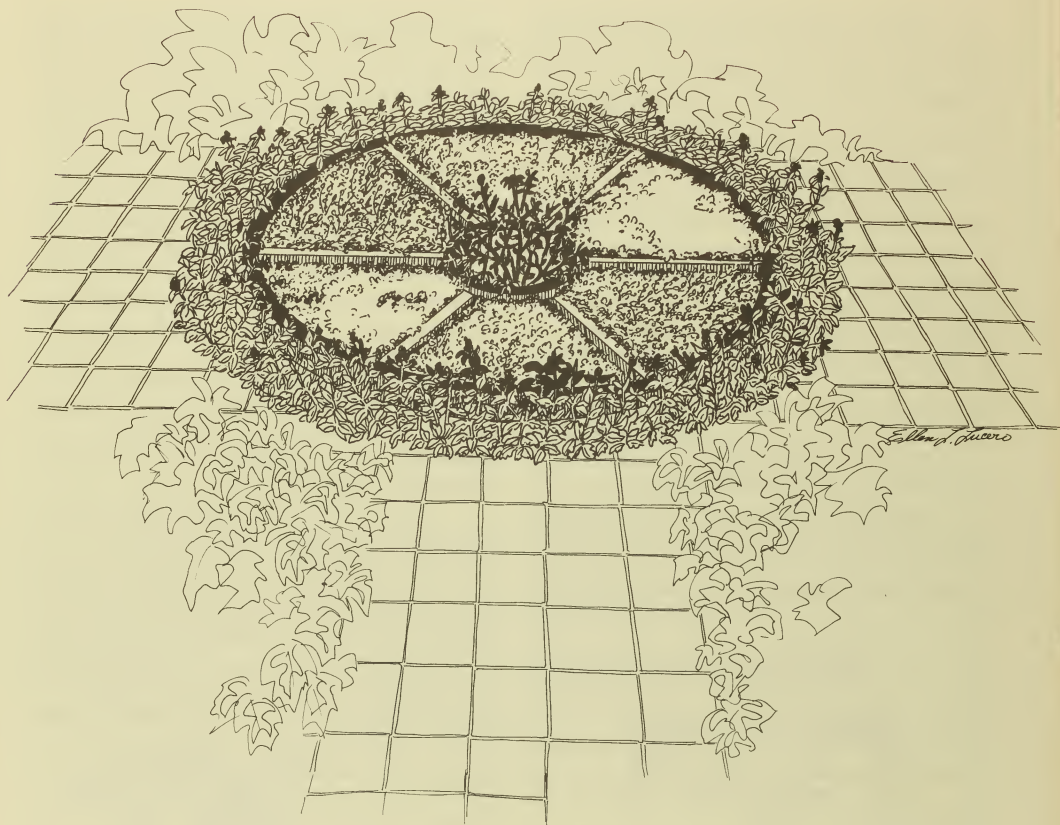
Few vines can surpass bougainvilleas for brilliance of color and showiness of bloom over a long period. □



All plants of Bougainvillea "San Diego Red" have a common parent which was discovered in a vacant lot and propagated by cuttings for the 1915 Exposition in Balboa Park.

Mrs. Carlson is a National Council Judge, a Rose Judge and instructor in horticulture.

Photos by Barbara Jones



Herbal Ground Covers

by Sharon Siegan

Herbs, long raised for culinary and medicinal uses, also have been valued in landscaping. For many centuries European palaces featured knot gardens, intricate patterns of interlacing bands of different colored, low-growing, compact herbs. They were particularly striking when looked down upon from a terrace or tower. To retain their precise geometry these formal designs required constant attention and perhaps for that reason there has been no local revival of knot gardens. Kent Taylor, Vista herb grower, who is well aware of the enormous resurgence of interest in culinary herbs, agrees.

"In time past, herbs were also used for more casual landscaping effects," mused Taylor, "and they seem to be of increasing interest today—particularly the fragrant ground covers." The British *Gardener's Chronicle* reports that fragrant lawns were popular in 17th century English and Irish gardens—chamomile or lavender, kept to 3 inches, being most prevalent.

"Most of today's English lavender grows upright to a height of about 3 to 4 feet and does not take well to low cropping. However, there is a dwarf, *Lavandula angustifolia* 'Nana,' and this 8-inch tall variant can serve as a lawn substitute," observed Taylor. Lavender is drought resistant; it prefers full sun and loose, fast-draining soil. "It is also tender, so do not expose it to foot traffic," he cautioned. "Plant it on a bank or tuck some plants into a rock garden where the grayish foliage will add a misty look and perfume the air. The blue flowers are a lovely bonus that would be sacrificed by shearing."

Taylor had no hesitation about recommending chamomile, *Chamaemelum nobile*, as a ground cover. "It will mat or mound from 3 to 12 inches and can even take foot traffic. Mow or shear it occasionally." Chamomile blooms are little yellow buttons which must be removed before they set seed to prevent plants from becoming straggly. Chamomile can be grown in full sun or very light shade, but it does require watering. In windy, dry, or cold areas it may look ragged and sparse. It is particularly attractive between stepping stones, where the fern-like leaves add a delicate tracery and a judicious footstep can release its fragrance.

"If your problem is an infertile, sunbaked, windy location, think thyme," suggested Taylor. However, he did not recommend the familiar cooking thymes, except for the caraway scented *Thymus herbariona*, as ground covers. He categorizes his herbs on the basis of height and restricts ground cover recommendations to those below 6 or 8 inches. Caraway thyme, at 3 inches, qualifies.

There is no dearth of low growing thymes among the creeping species. All are in the 2- to 4-inch range, with spreading habit, so they can be planted rather far apart. There is a wide choice in flower colors—purple, red, pink, white; also in foliage variation—leaf size, hue, and brilliance. Scent is generally described as spicy or aromatic; the discriminating can detect peppermint, caraway, lemon, orange, and even camphor.

Some of the varieties Taylor mentioned are: 'Albus,' as another choice for stepping stones, bright green with minute leaves forming a thick moss-like mat which flowers in drifts of pure white; golden thyme, 'Aureus,' which mats its dark green gold-mottled leaves into a 3 inch carpet; *T. glabrescens* var. *loerlyanus* blooming profusely with lavender flowers; woolly thyme, *T. pseudolanuginosus*, with small gray, hairy leaves accounting for its name and woolly look; *T. pulegioides* 'Coccineus,' a red-flowering variant. Two garden favorites often mentioned in herbals, but not adaptable to subtropical climates, are 'Splendens' the showy thyme with deep red flowers on a smooth green mat, and 'Annie Hall.'

Any of the above thymes will carpet banks or form resistant mats between flagstones to walk or even kneel upon, meanwhile releasing their delicate scent, and they all make delightful additions to rock gardens, crevices, and perennial borders.

If you find this multitude of thyme choices confusing, try a collection! One possibility is a "wheel of thyme." Set an antique cart wheel into the ground or create a pattern based upon it. Plant a different thyme in each pie-shaped space and rim the whole in germander, *Teucrium chamaedrys*. This may grow to 2 feet, but its stiff branches can be neatly clipped to a low edging. Germander, like thyme, thrives in poor soil and strong sun. For contrast, outline the spokes in silver thyme, *T. vulgaris* 'Argenteus,' which you may set in the hub also; or plant the hub in chamomile. Alternatively, you might divide your circle into 12 segments and set a sundial in the center for a most decorative effect.

Are you seeking a ground cover suitable for a shady, moist area? If so, and if you enjoy brilliant emerald color and creme de menthe fragrance, try Corsican mint, *Mentha requienii*. It is truly flat—only 1 inch, with tiny leaves in trailing clusters studded with minute purple flowers. This mint, also known as jewel mint, is lovely spilling over stepping stones or creeping out from stair crevices. And if it is confined to a sheltered, contained area, the air will be perfumed.

Most mints are not only strongly aromatic, but also grow quite tall. They range from the 18-inch curly and apple mints to the 3-inch peppermint and the 4-inch gray woolly Egyptian variety. They also share an invasive growth habit, typically sending out runners into neighboring ground. So unless you have a great bare area to welcome uncontrolled expansion,

root containment is vital. One way of accomplishing this is to create a "mint pool" reminiscent of those found in early cloister gardens. Trench out your pool, enclose it with rocks, drip water from a hollowed log or hose to form a marshy basin. Now plant your choice of mints and watch them thrive—and hybridize!

There is a creeping golden marjoram, *Origanum vulgare* 'Aureum,' which forms a pretty yellow ground cover and also provides a bonus of herb flavoring for culinary use. It grows to about 3 inches, but must be kept trimmed to prevent flowering. 'Aureum' is sun loving, but requires rich soil and good drainage.

Crete dittany, a marjoram relative, *O. dictamnus*, is not hardy enough for extensive ground coverage, but it is recommended for rock gardens. Its thick, rounded, woolly gray leaves make it more of a specimen plant, quite effective when nestled against a rock, particularly when its pink flowers are in bloom. It grows to about 6 inches and will double for oregano as seasoning.

For the unusual, Taylor recommends gotu kola, *Centella asiatica*. This medicinal oriental import is fast-growing and its large leaves form a dense cover, rising to about 6 inches. Grow it in shade, water it freely and he promises that you will enjoy adding the leaves to green salads or teas for a fresh flavor.

Plant sweet woodruff, *Galium odoratum* (As-

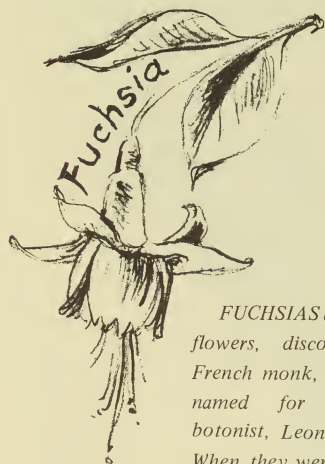
perula), beneath your magnolia for a woodsy look. In moist, rich soil, its neat leaf whorls will quickly proliferate into a thick, springy cover about a foot high. Sweet woodruff adds fragrance and flavoring to the "May (wine) Bowle."

The bushy 6 inch growth of catmint, *Nepeta mussinii*, repels rodents, it is claimed. Cats seem to enjoy rolling in it, which may account for its reputation. Although catmint does mound, its aromatic foliage can be sheared back.

The lovely soft, silvery foliage of fringed wormwood, *Artemisia frigida*, is a delightful ornament to the rock garden. When young, the plant is compact, but upon reaching a foot or so in height, it becomes rangy. Shear it back and save the clippings; they will root readily. Wormwood is drought resistant and can withstand poor soil.

This is a sampling of herbal ground covers. Almost all have the added charm of scenting the air when crushed. Many can be dried and used in sachets or herbal baths, and some can serve culinary duty. The emphasis has been on low growing herbs and ornamentals, but any perennial herb can be used as a ground cover, somewhere. □

Drawing by ELLEN T. LUCERO, San Diego artist, Spanish Village, Balboa Park, San Diego, California.



FUCHSIAS are American flowers, discovered by a French monk, Plumier, and named for a German botonist, Leonard Fuchs. When they were introduced to Europe they were called "lady's earrings." —B.K.



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TO ME THERE IS SOMETHING very special and satisfying about annuals. I reserve the best spot in my garden for them, in full view of the house. I watch them grow and bloom, and I give them away. The more I give away the more they bloom. When they have passed their prime I pull them out and put in something else. Do not think I am fickle because it's out with the old and in with the new; I plant the same things year after year and am constant in my affection.

Advantages of growing annuals are many: they cover an area quickly with beautiful foliage and bloom; they do not require constant thinning out, pruning, and cutting back; it is not necessary to divide every few years or let the foliage die down undisturbed as with bulbs, and they do not shed their leaves and become unsightly. However, many do shed their seeds and keep me supplied year after year with seedlings.

For many annuals October is "spring planting time" in subtropical areas; they become well established during the long sunny fall. Frost is the only hazard; in my area there has been none. Last year rains ruined my seedlings, but that does not occur often.

The method I follow is simple and flexible. October comes, I have a free day, the weather is right, I am tired of everything, so I go out and plant seeds and commune with nature. Before starting I consult one of two books, Roland Hoyt's *Ornamental Plants for Subtropical Regions* or Margaret Redfield's *Southern California Month by Month Flower Gardening*. Hoyt's book is of special value to beginners in that he has rated plants with one, two, or three asterisks; one for the easiest, three for the most difficult to grow. Then I check the catalogs to find out how long I have to wait for flowers, and read the seed packet for any special instructions.

Here are my ground rules. First, dig up the weeds, then dig in fertilizer and compost. (Do make your own compost.) I do all this at one sitting, and I do sit—on a plastic cushion. It's easier on the back! When one little space is ready, in go the seeds. A gentle watering and I am ready for the daily watch. I plant things in groups so if I do not get back to planting for awhile, at least I have one group blooming early. I put up cat barriers since my cats think I cleared and dug the spaces just for them. My husband has made cylinders of various sizes from wire fencing, cutting the lower edge so there is a row of teeth to push into the soil. I leave these barriers around the

plants until they are well established.

When the seedlings have two or three leaves, I thin and transplant the extras. I hate to throw away anything that has fought for life as my plants have, so I supply neighbors and generally win friends.

Since I use many nursery-grown seedlings in my annual garden, the plants I grow from seed are the ones not obtainable in nurseries. It takes a little more courage and patience to grow plants from seed, but there is a wider choice.

I hope I have said enough to encourage you to grow more annuals. I feel that growing annuals is a most rewarding outdoor pastime. In this creative partnership with nature one can be at peace with oneself and with the world.

Here are 23 of my favorites, with comments reflecting my own experience.

AGERATUM—if you like blue and something low.

CANDYTUFT—a beautiful drift of pastel colors; a 2-foot spray is a bouquet.

CLARKIA—one of my favorites. Many are single instead of double as with stock; pull out the singles if you don't like them.

CORNFLOWER—easily grown, foliage eventually becomes unsightly, but there's no other blue quite like it.

COSMOS—for summer, even comes in gold.

FORGET-ME-NOT—reseeds like a weed.

FOXGLOVE—full shade. One spike with a few leaves makes a flower arrangement.

LARKSPUR—some single, but all lovely.

LINARIA—reseeds year after year; resembles tiny snapdragons; pastel colors.

LOVE-IN-A-MIST—beautiful pods for dried arrangements, as well as charming flowers.

MEXICAN SUNFLOWER—takes a lot of room, but one or two plants will furnish all the clear orange daisy-like flowers you will need in a season.

MIGNONETTE—the name charmed me, but I found it also subtle in color and so fragrant.

MONEY-PLANT—you know its shining moons of pods in dried arrangements, but has beautiful purple flowers also. Watch for snails.

NASTURTIUM—you know about this one—reseeds year after year.

NEMESIA—like little snapdragons. Read the seed packet for sun or shade requirements.

PINCUSHION FLOWER—grows like a weed and year after year. Rather tall. Lovely in mass arrangements.

POOR MAN'S ORCHID (Butterfly Flower)—lovely pastel colors and fern-like foliage.

QUEEN ANNE'S LACE—be sure it's the real one. The wild carrot looks like it, but doesn't have the beautiful pure white umbels (flat flower clusters).

SNOW-ON-THE-MOUNTAIN—many fatalities, but a few of these is enough.

STOCK—more beautiful from seed than from nursery. They hate to leave that enriched soil and accept your soil!

STRAWFLOWER—one year they were as tall as I. Haven't had such luck since, but they grow!

SWEETPEA—needs plenty of room and trellis or fence.

ZINNIA and **TAGETES**—I put them together as I have the same problems with both as seedlings—the snails love them. □

LETTUCES

KNOW ONE KNOWS how long the human race has been eating tender green leaves with oil and vinegar, but the practice started early and continues to this day. Spinach, tender leaves only, is becoming popular; gourmets are partial to the bitter curly endive; the sophisticated hunt out crisp hearts of chicory, but most of us are satisfied with lettuce.

Head lettuce is the favorite, solid, colorless heads that one can slice or tear and smother with rich creamy dressings. Produce bins are full of these near-zero-calorie heads at all seasons. They contain so little nourishment that dieters can eat a whole head and then feel smug, knowing they have not stuffed themselves with calories, (providing, of course, that they used only a little season salt and vinegar as dressing). The crunchy texture is pleasing and makes a good beginning to a meal.

These fine hard heads can be home grown, given about three months of continuous cool weather and rich loamy soil in full sun. Planted in October, with a second sowing in late January, you will harvest nice heads—if the winter is cool but not cold, if continuous heavy rain does not rot the low growing plants, if prolonged periods of hot, dry, windy weather do not occur, and if the young plants are thinned to about eight inches apart. After one of those winter hot spells a plant may bolt, that is, send up a bloom stalk. The best recourse then is to start over. Iceberg is one of the old standbys, but catalogs list others that are worth a try and may do better in some gardens.

Butterheads are not so hard of head; they mature faster (75 days); they are green all through and they have higher mineral and vitamin content. Also, they are more easily digested than the crisp-heads, which some persons can not tolerate at all. All the butterheads make pretty rosettes which can be served individually, or their leaves can be torn apart and tossed. 'Bibb,' 'Boston,' and 'Buttercrunch' are in this group.

Loose-leaf varieties are the easiest to grow and they are highest in food value. They are ready to eat in thirty to forty-five days, although thinnings can be eaten sooner. Their leaves range in color from light green to red-brown; their texture is velvety rather than crisp and they are the most flavorful of all. Plant thickly and count on thinning, eating the thinnings as you go. A six-inch spacing between plants is about right.

'Oak leaf' varieties are pretty and flavorful; 'Green Ice' is crisp and highly ornamental with its crimped and curled leaves. 'Black-seeded Simpson' also is brittle and sweet. Plant several kinds and then decide which you prefer, or just indulge yourself in variety.

Progressive plantings will keep the old wooden salad bowl going. Mine is rubbed with garlic or magnolia seeds and anointed with a tablespoon of oil (I prefer olive), the torn lettuce leaves are tossed until covered with the oil, then some season salt and flavored vinegar is dropped in with the final toss just before serving.

Sow lettuce seed a little at a time, with ten days to two weeks between sowings. Cover one-half inch deep in well-prepared soil enriched with humus and keep moist by frequent sprinkling. For head lettuce the best method is to plant in rows and irrigate, as is done commercially. In warm subtropical climates the planting months are September to April—later plantings tend to become bitter and tough, even with plenty of water.

Snails and birds are partial to young lettuces. Screens are almost a necessity, especially with the leaf lettuces. The birds know what is good. This year I have grown lettuce in pots, and have found that cos or romaine does especially well. In a very short time it will produce leaves up to ten inches in length, sweet and tender enough for salads.

Don't forget that lettuce is beautiful as well as edible—a border of lettuce or groups of plants mixed with the flowers are welcome additions to the ornamental garden.

by *Rosalie Garcia* □

DID YOU KNOW that lettuce—

- in its earliest forms did not form heads, but put out leaves from a tall central stock.
- was called asparagus by the early Greeks.
- was taught to form heads by the Romans after the first century A.D., and they named this head form "lactuca."
- was cultivated in China by the 5th century.
- was not cultivated in England until the 15th century.
- was taken to North America but was only grown in private gardens and did not become popular until after World War I.

—B.J.



A Garden Tour of "LOTUSLAND"

by Charles Glass

The very-expansive perfectly-manicured lawn to the east of Madame Ganna Walska's home serves as the access-route to several of the specialized formal-garden areas. Three groups of garden visitors are seen in this picture; each group proceeding toward different attractions.

"LOTUSLAND" is a privately owned 40-acre estate located between the mountains and the sea in Montecito, California, near Santa Barbara. It is owned by Madame Ganna Walska, who for over 40 years has applied her entire energy and that of her 22 full time gardeners to the creation of one of the outstanding botanical gardens of the world. At the present time admission to the gardens is by special invitation only, but there is reason to anticipate that sometime in the future the gardens will become an endowed publicly-owned botanical park, open to all. Lotusland is probably the most elaborate privately-owned garden in the United States.

At the main entrance, on Sycamore Canyon Road, the sweeping curve of an old pink wall is accentuated by the bluish-white elegance of *Agave franzosinii*, with two sentinel Chilean wine palms, *Jubaea chilensis*, on either side of the wide, wrought-iron gates. Even the gate posts are surmounted by agaves. The graceful curve of the main drive is lined with thousands of lush, green *Agave attenuata* bordered with sedum and backed by tree-aloes, yuccas, and dracaenas. Towering above all is a forest of blue gums and acacias. Around the main sweep of the drive, beside the entrance to a proposed tropical glen which will feature aroids and other epiphytes, is a border of large, graceful *Howea forsterana* palms, and on the left, next to a large cluster of *Rhapis humilis*, an impressive Torii gate, the entrance to the Japanese Garden.

• THE JAPANESE GARDEN

The Japanese Garden is dominated by the huge lotus pond, with an island of *Cycas revoluta*, the "Sago Palm." Following the brick and tile path to the right we get our first taste of the beautifully manicured style of the garden areas, walking through groups of Japanese red maples, heavenly bamboo, Japanese black pine, azaleas, rhododendrons and camellias, interspersed with stone lanterns and pagodas. All the rocks in this setting have been brought onto the estate from other parts of California. The enormous granite boulder which forms the footbridge at the base of the waterfall, for instance, comes from the mountains east of San Diego and was moved into position by hand with an elaborate system of pulleys and rollers, in a fashion undoubtedly very similar to the way the pyramids were constructed ages ago.

After making the full circuit of the Japanese garden, the drive curves off to the right to avoid the yet-to-be-completed extensive cycad garden and a profusion of palms, including the rare *Parajubaea cocoides* and some exceedingly tall howeas. Near an enormous specimen of bunya-bunya, *Araucaria bidwillii*, another path leads to the left, through a tunnel of livistona palms to a stand of black bamboo and rattan palm, *Rhapis humilis*, which marks the entrance to the Aloe Garden.

• THE ALOE GARDEN

In 1975 the Aloe Garden was entirely renovated, with nearly every plant removed from the ground and replanted into new soil. Hundreds of tons of sand, gravel, top-soil, planter mix, and several hundred large black volcanic rocks from eastern Cali-

fornia were added at this time. In some places the soil level was raised as much as seven feet. Featured among the hundreds of aloes are the tree aloes: *Aloe bainesii*, *A. dichotoma*, and *A. ramosissima*, *A. speciosa* and the short *A. plicatilis*, to name but a few.

In the middle of this fantasy garden is a fairy-land pond of abalone shells, coral, and giant tridacna clams. At the far end are the water-lily ponds, an intriguing blend of formal and natural motifs. The central pond, now home to the giant *Victoria regia* (*V. amazonica*), was formerly the swimming pool of the estate. With long vistas down the rows of juniper to the south, and palms and agaves to the north, this pond is bordered on both sides with naturalistic ponds housing more water-lilies, papyrus, and horsetail reeds, and edged with agapanthus.



Statuary abounds throughout the gardens of "Lotusland", all in the classic style, and all of them in harmony with their surroundings.

• THE SUCCULENT GARDEN

Directly opposite the Aloe Garden is the entrance to the Succulent Garden. Like the Aloe Garden, this one was completely renovated in 1974. Where formerly it had featured the more common echeverias, crassulas, and sedums, now the featured types are the caudiciform succulents of Mexico, South Africa, and Madagascar. There are particularly fine representatives of the singular family Didiereaceae from Madagascar, with such uncommon species as *Alluaudia procera*, *A. ascendens*, *A. dumosa*, and *A. humbertii*, and the most strange *Didierea trollii*. Other unusual caudici-

form succulents include *Gerrardanthus* of the gourd family, various *adenias* of the passion-flower family, various *Cyphostemma* species of the grape family, and from Mexico the curious barrel-tree, *Fouquieria fasciculata* and the odd *Calibanus hookeri* named for Shakespeare's monster, Caliban, in "The Tempest." Of interest are *Dioscorea elephantipes* from South Africa with a caudex or swollen trunk like a tortoise shell, and its relative from Mexico, *D. macrostachya*, the original source of the birth-control pill. Most interesting of all, perhaps, are the tall, spiny pachypodiums from Madagascar, relatives of the familiar oleander.

• THE BLUE GARDEN

One of the largest plants of *Helicocereus speciosus* in existence, and a giant egg-like rock of Santa Barbara sandstone, mark a path leading through Lotusland's famed Blue Garden where all the plants are selected for their blue color, from the blue festuca grass to the blue *Brahea armata* palms, blue Atlantic cedar, blue *furcraeas* and blue spruce. Here one sees the largest and finest Chilean wine palm on the estate, a giant with a trunk circumference of 13 feet.

• THE CACTUS GARDEN

The drive continues to the main cactus garden which is dominated by various large *Trichocereus* species, a grove of *Neobuxbaumia polylopha* (*Cephalocereus polylophus*) and another *Cereus peruvianus* 'Monstrosus.' One of the most spectacular groupings is of the 'Golden Ball' cactus, *Notocactus leninghausii*, surrounded by white *Oreocereus* (*Borzicactus*), *Es-postoa*, and *Cleistocactus* species. On the opposite side of the drive is the Euphorbia Garden with shapes very similar to the cacti, but these marvelous succulents are in fact in the same genus as the poinsettia and no relation to cactus. The culmination of the Cactus Garden is the monumental display of hundreds of 'Golden Barrel' cacti, *Echinocactus grusonii*, in front of the house with giant specimens of *Trichocereus*, *Cereus*, and *Stenocereus* (*Lemaireocereus*).

• THE FERN GARDEN

In front of the house, around the spacious courtyard, is a large circular planting featuring the huge dragon trees, *Dracaena draco*, from the Canary Islands. Behind the circular drive, with its border of fishtail palms is the lovely tropical Fern Garden, its winding paths wandering through groves of various types of tree ferns and live oak trees hung with enormous staghorn ferns, the ground carpeted with ferns and begonias. The Fern Garden acts as the entrance to the swimming pool whose blue waters reflect the

blue deodar cedars that surround it. To the right is a small beach area enclosed with a natural rock wall and decorated with giant clam shells holding blue crassulas. The path wanders around the house and leads to the patio, a beautiful example of early Spanish-California architecture, with its graceful arches, exquisitely designed fountains and aqueducts surrounding a large, old olive tree.

• THE FORMAL GARDENS

Beyond the house is the formal Geranium Terrace with its myriad flowering geraniums and Goya tile decorations, then an elegant unique pebble mosaic leading to the Neptune Fountain, past the long vista of the Rose Garden to the citrus orchard, beyond which is the formal Flower Garden.

Around a large Zodiac Clock the Topiary Garden features various topiary animals and some "poodled" eugenias and live oaks.

Across the broad lawn, bordered with *Agave franzosinii*, *Furcraea* and *Phoenix reclinata*, is the second Bromeliad Garden, then a grove of *Beaucarnea recurvata* with their enormous swollen trunks. Nearby is an intimate Elizabethan theatre, delineated by hedges, upholstered with grass, baby tears, and ivy, and decorated with 17th century stone figures—Mme. Walska's "Grotesques" which she brought from her chateau in France.

• THE CYCAD GARDEN

In the Cycad Garden at Lotusland we see one of the world's finest and most important collections of these rare and exotic plants. Sometimes cycads are called "living fossils" because they are an exceedingly old group of plants dating from before the appearance of flowering plants on the earth!

The southern African genus of cycads, *Encephalartos*, one of the most attractive and interesting, is exceedingly well represented with over 50 different species and varieties, including three fine specimens of *E. woodii*. Also represented are members of the genera *Stangeria* from Africa, *Dioon*, *Ceratozamia*, and *Zamia* from North America, *Cycas* from southern Asia and *Macrozamia* and *Lepidozamia* from Australia. At present, Lotusland is in the process of creating an entire new garden area to be devoted to the expanding collection of cycads, so they may be exhibited as they deserve to be by virtue of their rarity, their beauty, and their horticultural value. □

Mr. GLASS is Editor of "Cactus Journal"

Photos by BILL GUNTHER

Louisiana Irises

OF THE THREE HUNDRED SPECIES in the genus *Iris*, the Louisiana irises constitute the series Hexagonae; this is a closely related small group of about four species characterized by having six-angled seed capsules. The four species are native to areas along the Gulf Coast of the southeastern United States and up the Mississippi Valley to Ohio. The species come together in the region of the Mississippi Delta of Louisiana—hence their common name. Each species naturally grows in moist areas, some in meadows, and others in swamps, and they are sometimes called “swamp irises.” While most of them grow best under very wet condition, Louisiana irises can be grown satisfactorily in beds of garden soil made acid and kept moist.

Unlike the familiar tall bearded irises which have been cultivated for centuries, the Louisiana irises have been brought into cultivation only during the last fifty years. In fact, selective hybridization and improvement by man has taken place in the last thirty years. Interest in these irises as garden plants was sparked by the discovery of many colorful and beautiful natural hybrids in the delta area. The older named cultivars are selections of species and their hybrids which were collected in the wild.

The wide range of forms and colors of irises in the delta area led some botanists to publish many as apparently distinct species. However, during the 1930's and 1940's, evidence from horticultural, genetic, and ecological studies clarified that most of the variations were the result of natural hybridization. Most of the new species were only beautiful mongrels.

The scientific investigations of the Louisiana irises have given them a significance beyond their intrinsic beauty. They have contributed significantly to our knowledge of the genetics of hybrids and the control which the environment exerts on natural hybrids. These irises were the major examples used by Edgar Anderson in 1949 in his classic monograph on introgressive hybridization, the process by which characteristics of one wild species can gradually be transferred to another wild species through hybridization under natural conditions.

Study of the hybrids in the field showed they occurred exclusively in habitats which were disturbed, and most in habitats disturbed by man. This led to an understanding that the adaptation of a species to a certain habitat, just as the color and form of flowers, is controlled genetically. For example, *Iris fulva*,

from wet clay soils, and *I. giganticaerulea*, from mucky soils of tidal marshes, hybridize wherever their habitats come close together, but the only hybrid seeds which germinate and grow to maturity are those that fortuitously land on an intermediate habitat. This habitat may be the result of man's disturbance or a natural cataclysm such as flood, fire, or the changing course of a river. The survival of succeeding generations of hybrids of these hybrids, where the greatest variation of color and form is expressed, is dependent upon the nearby occurrence of increasingly disturbed or “hybrid environments.” This control of the survival of hybrids by the environment explains why the most variable and frequently most beautiful swarms of hybrid irises are found at sites heavily disturbed by man and his grazing animals.

by Fred Boutin □

Adapted, with permission, from the “Calendar” of the Huntington Library, Art Gallery, and Botanical Garden, San Marino, Calif. 91108.



Photos by Bill Gunther

Upper: ‘Madcap’—performs well in Southern California. Hybridized and introduced by Eleanor McCown. Lower: ‘Lime Star’—an old cultivar which has retained popularity because of its unusual vigor.

GERBERAS

The Transvaal Daisy

by Skipper Cope

THE GERBERA, named for a German botanist, Gerber, is a perennial native to Transvaal in South Africa. Commonly called the Transvaal daisy or African daisy, it has been gaining in popularity every year. The flowers rise on graceful 18-inch stems from a rosette of lobed 10-inch long leaves. The smallest flowers are 3 to 4 inches in diameter and the largest may reach 7 to 8 inches across. They come in a variety of forms and a wide range of colors—lavender, apricot, chartreuse, or flame—every color except blue.

The flowers are almost as varied in form as in color, with the petals varying in width from very coarse to extremely fine. Hybridizers are producing doubles with short rays (petals) outlined by layers of longer rays radiating from an open center which may be either yellow or dark. Others have all long rays forming what one might call a pleated circle around the open center. In some forms the rays cover the disk completely. These are called duplex by the growers. The flowers with extremely fine petals are, appropriately enough, called threads. Then, of course, the original singles are always desirable.

In order to get the exact color and form that appeals to you personally, it is advisable to buy plants when they are in bloom, if possible. However, they are available in bare root, seed, or seedlings as one prefers. Seeds should be started in flats and the seedlings planted in beds or containers when they have three leaves. The soil needs no extensive preparation, but plants must have heavy feedings of rose food or any good well balanced food during height of bloom. (Once per month in heavy soil and twice per month in light soil.)

Choose young vigorous clumps three to four years old when making divisions. Lift, just as the plants are starting new growth cycle in the early spring and have both new leaves and flower buds. Each division should have at least two clusters or eyes. Cut the roots back to 5 or 6 inches to encourage new root growth, and plant in fresh sterilized soil, either in a container or in the ground. Water well with B1 solution added to reduce shock and fertilize when re-established.

When transplanting, one must be careful to keep the crown well above the soil surface. It is essential that the crowns remain free of soil and moisture. As clumps grow the roots tend to pull the crown down below ground level. If the soil is not removed and the crown kept open to light and air the



plant will commit suicide. Gerberas need lots of water, but good drainage is absolutely essential. Planting on a slight slope is ideal. The gerbera is a sun-loving plant, but it can stand considerable cold if of short duration. The clump will not die, but the blooms will be retarded.

Norman Thurman, one of the largest commercial growers in the world, highly recommends growing them as pot or tub plants. Use sterilized, prepared soil mix. The eight-inch pots available at nurseries contain six-month old plants that have their first flowers. By the time the plant is one year old, it should have continuous bloom, about 75 blossoms a

year, and more as the clump becomes larger. A tub specimen should do well and bloom almost continuously for three to five years. When the plant becomes large, part of the foliage should be ripped out of the center to allow light and air to penetrate. If they are fertilized regularly, get plenty of sunshine and water with good drainage, gerberas will bloom profusely and the flowers will last from two to three weeks on the plant.

The flowers on each plant are the same color, but the shade may vary slightly at different times of the year because of changes in the density of natural light. A change in fertilizer can cause a slight variation in color too. A bit of blood meal now and then makes the colors more vibrant.

Flowers with coarse, broad petals are better for cut flowers. If they are arranged in warm water with some floral preservative added they will last from seven to ten days. Flowers should never be cut from the clump, but should be pinched off as low as possible with the fingers. This helps to prevent diseases from entering the plant.

So, whether one wants long-blooming free-flowering plants for the garden and patio, or many lovely long-lasting cut flowers, or both, the beautiful answer is gerberas! □

Care of Gladiolus Corms



GLADIOLUS will grow for some time after they have finished flowering, especially if water applied to nearby plants soaks into their root zone. Allow them to grow for six to eight weeks after blooming, then dig. Without cutting off the green tops, lift the corms with as much soil as possible and place them in a shady place to finish drying. When dry the brown tops can be removed and the dirt shaken off. The corms should be stored in well ventilated containers placed where there is good air circulation.

Replant in the late fall for flowers the following spring.

—G.J.

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HOME GREENHOUSES HOME GREENHOUSES

by Barbara Jones

ALONG WITH THE POPULARITY of the California Green Salad in England has come an expanded interest in the home growing of "the greens." As the outside growing season is short, a greenhouse-type structure is being widely used to prolong growing. In May, at the world famous Chelsea Flower Show in London, many types of greenhouse structures were exhibited. One intriguing style was selling like the proverbial hot cakes, and one of these, with its frame and plastic covering neatly folded in an 8x36 inch plastic bag, was brought back to California under an airplane seat (see sketch).

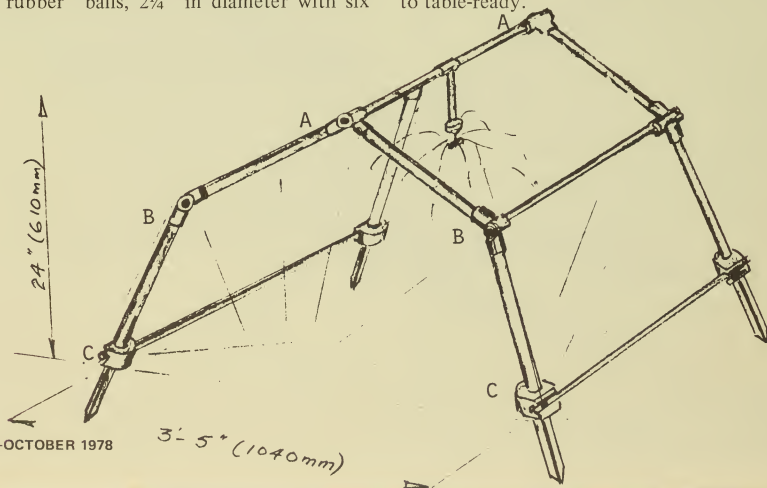
A structure of this type would be of particular value to any home gardener. Its advantages are: (a) It is portable and can be moved from bed to bed, (b) the sides can be raised to facilitate easy care of plants or to ventilate, (c) watering can be done without raising the sides as a hose can be attached to the plastic ridge pipe with a permanent sprinkler device, (d) it can be taken down and stored in an 8" x 36" bag when not in use, and (e) it is relatively inexpensive. The structure can be used without the plastic to support netting or shade cloth.

Another clever idea for making a support for bird netting or vines was found at the show. Sets of four hard "rubber" balls, 2 1/4" in diameter with six

small holes, were being sold so one could construct a support structure in "tinker toy" fashion with bamboo-type garden canes. One hole went through the middle to make two openings and the other four holes were evenly spaced at right angles around the perimeter. These holes were from 3/8"-5/8" in diameter to accommodate different size canes. Several large structures were being demonstrated using these balls. These structures could be dismantled easily at the end of the growing season and the balls stored until needed.

• MAKE YOUR OWN

One could easily and inexpensively construct a portable greenhouse by using rigid plastic tubing available at hardware or garden shops. The plastic cover could be made from heavy clear plastic available at the same shops. The two end panels could be secured by making five holes in a plastic sheet cut to fit. See the sketch—hole "A" would fit over the end of the ridge pole and the side supports could be threaded through "B" and "C". By drilling a series of small holes in the ridge pole and attaching a hose coupling at the end, the inside could be watered easily. In fact, once the construction was completed the greenhouse could remain in place over tender "greens" from seed to table-ready. □



Indian Corn

by Barbara Jones

DRIED INDIAN CORN on the cob is found in markets throughout the Southwestern United States in the fall. Kernels are tough for eating fresh, but they are beautiful. On the same ear kernels of yellow and white, plus ones which range in color from red through a deep purple, and black can be found. In New Mexico this corn is ground and used for preparing many foods. The first encounter with purplish cornbread can be a surprise.

Many follow the custom of hanging several dried ears on the door as a "Harvest Bouquet." Usually the bouquet is hung in October and remains until replaced by a Christmas wreath. For Halloween several ears are often used with a pumpkin or two, or whole dried stocks are arranged with a fanciful jack-o'-lantern. No Thanksgiving centerpiece of dried gourds and nuts would be complete without this colorful corn.

Indian corn, *Zea mays*, is native to the Americas and has been cultivated for thousands of years. In 1496, Columbus brought the first samples from the Caribbean to Spain. During the 16th century it was planted throughout western Europe and became one of the important foods. The Pueblo Indians were the first in northern America to acquire corn. Kernels found in New Mexico caves have been dated at 3500 B.C. It is known that the Hopi cultivated four kinds of corn: white used for bread or gruel, yellow roasted and eaten on the cob, and red and blue used for making piki bread for ceremonies. At a later time other Indians cultivated corn. The Plains Indians grew a little quick maturing corn. Indians in the Northeast buried several fish under each hill before they planted corn and squash seeds. In the Southeast corn and beans were planted in the same hill.

GROW YOUR OWN—This is not the season to plant corn, but save the Indian corn for spring planting. Corn needs a rich soil and steer manure or fish heads, etc., buried in the hill will be excellent. The Indians who planted beans with their corn were wise because corn depletes the soil of nitrogen and beans return nitrogen to the soil. As the germination rate of this ornamental corn will probably be poor, about ten kernels should be planted in each hill. If they should all germinate, thin and save four or five of the best. Bees will cross-pollinate and we had quite a few colored, tough kernels on our roasting ears. So, it would be wise to not plant this corn too near eating



Indian Corn 'Maise' *Zea mays*—one ear is dull with yellow and white kernels, the other a very dark purple

corn in the garden. When the corn matures, strip back the husks and let the ears dry. Coloration will not be consistent. Some ears will be dull while others may be brilliantly colored. Commercially sold ears are all about the same size, but the home grown ears will vary in size.

Even if one does not have a vegetable garden, corn stalks are attractive. Put a hill or two in your flower garden or hedge border. You will find it is fun to grow your own "Harvest Bouquet." □

THE GIANT BIRD AND A FRIEND

by Adrienne Green

ALMOST HIDDEN from view among dramatic banana-like leaves are the striking blooms of *Strelitzia nicolai*. In the arrangement pictured, a double-headed single stem is used in a cup needle holder. The handsome silhouette of the flowers is repeated by the angles of "found" seesaw—two pieces of iron. The iron has been painted black to repeat the dark hue of the floral envelopes. The flowers themselves are white with blue tongues.

The contrasting wire-like foliage is that of *Corokia cotoneaster*.

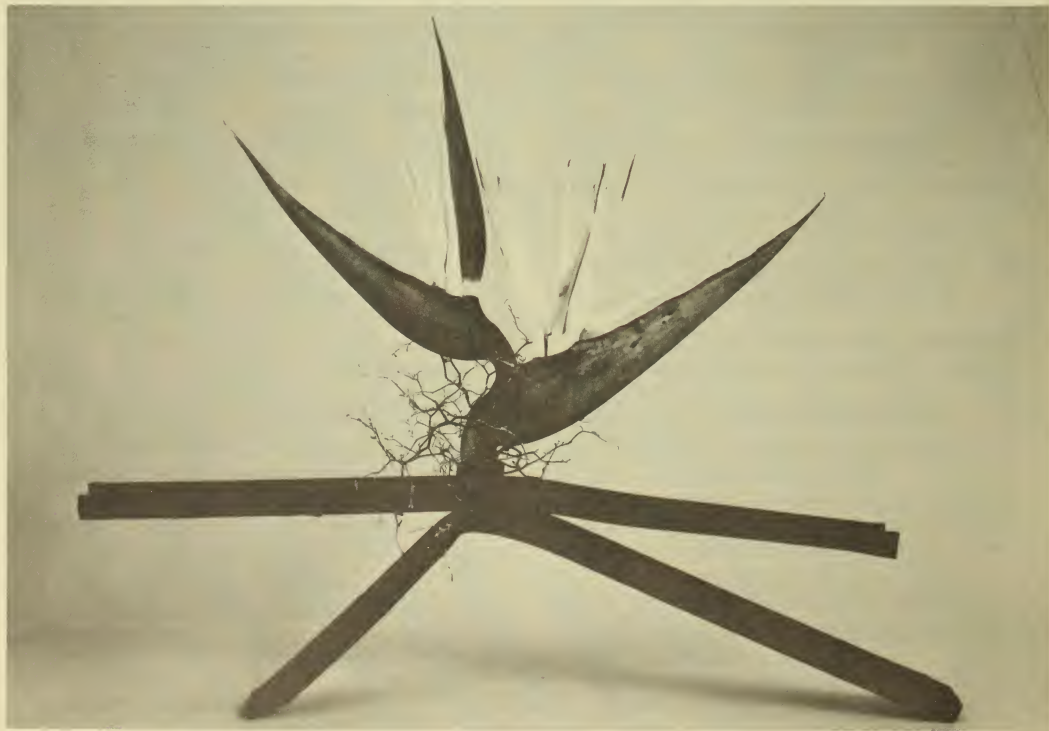
What are the growing characteristics of these two so different plants? The giant bird of paradise is tree-like, growing in clumps up to 30 feet high. Its gray-green leathery leaves are arranged in fans on erect or curving trunks. In order to reach full size young plants need to be fed regularly. Feeding may stop once the desired height is reached. Trim out

dead leaves to maintain lush growth and keep the plant attractive. It produces orange seed pods after flowering.

The corokia, native to New Zealand, grows slowly up to 10 feet. The intricate branch pattern of its contorted, nearly black, stems makes it fascinating always, both in the garden and in flower arrangements. Its leaves are less than an inch long, green above and white beneath. Corokia thrives in sun or part shade. It is often grown as a container plant in a fast draining soil mixture.

The two companions in the arrangement are easily grown in the garden. □

Photo—Wm. E. Mackintosh



leafin' thru



THE SMALL GARDEN

John Brookes, Macmillan Publishing Co., Inc., New York, 1978, 255 pages, 600 illustrations, \$19.95

John Brookes is one of England's most renowned garden designers and instructors in gardening and garden design. His first sentence reads, "Where space is restricted, the design of that space is all important". With historical references he leads the reader to choose a basic style to suit his house and his style of living. This interesting and very readable book is filled with ideas. Illustrations are excellent and even though plant materials suggested might not be suitable for all climates one could readily find a substitute to produce the same effect. An attractive book which should be equally useful to the new home owner establishing his first garden, and to the one doing over an existing garden.

—Reviewed by Barbara Jones

GROWING FOR FREEZING

Author-Editor Renny Harrop, Designer Caroline Austin, Macmillan Publishing Co., 866 Third Avenue, New York, NY 10011, 88 pages, \$8.95

Just looking at the color photographs of vegetables, fruits and herbs as one turns the pages is a mouth-watering experience itself. The home gardener is given detailed information on how to grow, when to harvest, and how to freeze all kinds of surplus. Thirty four vegetables, sixteen fruits, and sixteen herbs are chosen for ease of cultivation and suitability for freezing. Alphabetically arranged for quick reference.

—Reviewed by Rosalie Garcia

GARDENING WITH CLIMBERS

Una Van Der Spuy, Protea Press Publishers, Stellenbosch, South Africa, 1976, 119 pages

This beautifully illustrated book discusses how to choose climbing plants, how to support them, when to plant, prune, and feed. Detailed descriptions, illustrations, and cultural requirements are given for over 200 plants. Climbers are listed by bloom season, color or bloom, and suitability to various climates.

The section on bougainvilleas is so good that I am inspired to go out into my garden this very minute and try to get my own bougainvillea under control!

—Reviewed by Barbara Jones

A PLEASURE OF FLOWERS

by Victoria Stanhope Roberts, Stockpile Books, Cameron & Kelker Sts., Harrisburg, Pa. 17105 (To San Diego Floral Asso. by Strawberry Hill Press, 616-44th St., San Francisco, CA 94121), 128 pages, \$5.95

To gardeners the romantic and poetic point of view on flowers is a change. To those who wish to send flowers as a gift, here is a reference and guide. It is the ancient language of flowers brought up to date. Flower meanings are spelled out in the occult, in astrology, numerology, and just plain fantasy. Those who talk to their flowers will find in the chapter on flowers psychology a poetic monologue to a rose.

—Reviewed by Rosalie Garcia

HORMONE ACTION IN THE WHOLE LIFE OF PLANTS

Kenneth V. Thimann, The University of Massachusetts Press, Amherst, 1977

Don't let the title deter you from reading this book. Dr. Thimann details the work of hormones in controlling all stages of growth in higher plants, from seed germination to seed production. With its clear and simple explanations, this book should serve the advanced student as an introduction to the field, and provide general information for the eager hobbyist.

—Reviewed by Barbara Jones

DISCOVER THE TREES

by Jerry Cole, illustrated by Mike Anderson, Sterling Publishing Co., Inc., 419 Park Avenue, New York, NY 10016, 95 pages, \$4.95

Looking for a good book for a child over eight? Here is one. Read it yourself before giving it away—it is a book for anyone to learn from and enjoy. Cole, formerly with the U.S. Forest Service, knows his trees. He also keeps in mind that he is writing for children. He selects forest and park trees from all over the country and lists their distinguishing characteristics. He describes state trees and trees famous in our history. Amusing drawings by Mike Anderson illustrate the uses of trees. There's a list of questions and answers for a child to learn and then spring on other children or ignorant adults that will delight a "learned" youngster. Altogether a delightful tree book.

—Reviewed by Rosalie Garcia

now is the time

—A Cultural Calendar of Care
from our affiliates—

compiled by PENNY BUNKER

BONSAI Dr. Herbert Markowitz

- ✓ to adjust watering schedule to variable weather. Shallow pots may require two or three daily waterings on hot dry windy days.
- ✓ to transplant wisteria if you want blossoms next spring.
- ✓ to also repot quince, olives, and podocarpus.
- ✓ to move deciduous trees to cool, shaded areas if you live in Southern California, so they will not sprout new growth.
- ✓ to fertilize only lightly or not at all in October if you fertilized in September.

BROMELIADS Dr. Norman Lurie

- ✓ to keep surrounding areas damp to maintain humidity on hot dry days.
- ✓ to protect plants from hot winds, shading them from intense heat and giving morning mistings.
- ✓ to feed carefully with ½ strength balanced fertilizer.
- ✓ to flush out plants and keep moist.
- ✓ to maintain pest control—treat for snails or scale if necessary.

CACTUS & SUCCULENTS Verna Pasek

- ✓ to anticipate Santa Ana winds—keep moisture in soil but otherwise start hardening plants.
- ✓ to divide overgrown plants and propagate new growth to share.
- ✓ to watch for scale and mealybug. Spray with full strength alcohol, or dab on with cotton swabs.
- ✓ to repot root-bound plants—watch for roots growing through drainage holes.
- ✓ to give a low nitrogen feeding.

CAMELLIAS Les Baskerville

- ✓ to keep plants moist—do not allow plants to dry out during hot, dry windy weather.
- ✓ to start monthly feeding of 2-10-10 fertilizer.
- ✓ to disbud, leaving no more than one bud to a tip.
- ✓ to give a feeding of iron.

DAHLIAS Abe Janzen

- ✓ to spray regularly to prevent mildew, and to keep spider mites and other insects under control.
- ✓ to keep up regular watering until the first of October—then cut down.
- ✓ to feed with potash in October only, to promote healthy root growth.

EPIPHYLLUMS Mary & Warren Kelly

- ✓ to stake growing plants and tie carefully to trellis if growing upright.
- ✓ to check for snails and slugs.
- ✓ to fertilize with 5-5-5 once more before winter rest period.
- ✓ to harden for winter dormant period.
- ✓ to clean oxalis and other weeds from pots.
- ✓ to spray mist during hot spells to provide moisture.
- ✓ to spray with insecticide such as malathion for insect control during winter months.

FERNS Ray Sodomka

- ✓ to water and maintain humidity by keeping surrounding areas damp.
- ✓ to fertilize plants regularly—use a high-nitrogen fertilizer.
- ✓ to protect from hot sun—check sun angles for positioning shade cloth and lath.
- ✓ to trim off dead fronds.
- ✓ to plant fern spore.
- ✓ to spray for aphids and scale. Keep snails, pill-bugs and slugs under control.

FUCHSIAS William Selby

- ✓ to combat insects—spray as required and be sure to wet underside of leaves as that is where they hide and lay their eggs.
- ✓ to leach out salts from your pots, then give plants a shot of acid fertilizer.
- ✓ to practice good housekeeping—keep spent blossoms and seed pods picked.
- ✓ to make early cuttings as you cut back leggy growth.
- ✓ to mist on hot muggy days.
- ✓ to take cuttings in October to propagate new plants.
- ✓ to continue to fertilize for winter bloom.

GERANIUMS Carol Roller

- ✓ to continue feeding with a balanced fertilizer in liquid form at ½ strength.
- ✓ to water carefully, decreasing the amount when cooler weather arrives.
- ✓ to keep plants free of debris by removing faded flowers and discolored leaves.
- ✓ to continue pest and disease control using products according to the manufacturer's directions.
- ✓ to begin pruning. Trim back about ½ on regals and similar types.
- ✓ to make cuttings and give them shelter from extreme elements.
- ✓ to continue pest and disease control—spray soil and under leaves using Cygon E for whitefly.
- ✓ to control worms with chlordane or sevin.

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NOW IS THE TIME

continued from Page 157

IRIS Iris Plantwell

- ✓ to still divide and plant clumps of bearded iris.
- ✓ to plant beardless iris. Keep moist until well established. Japanese and Louisianas are grown in pools.
- ✓ to feed established tall-bearded plants.
- ✓ to plant Dutch iris in October for spring bloom.
- ✓ to control slugs and snails.
- ✓ to trim the unguicularis back so flowers may show.

ORCHIDS Charlie Fouquette

- ✓ to water and mist cymbidiums—maintain humidity during hot, dry winds. Don't let foliage burn.
- ✓ to change to low-nitrogen fertilizer—buds are now forming.
- ✓ to check for any scale or insects, and to spray accordingly.
- ✓ to cleanup greenhouses for winter.
- ✓ to check controls for swamp coolers and heaters, oil fan motors and pulley sleeves. Check other automatic equipment.
- ✓ to let some paphiopedilums dry out a little.
- ✓ to feed "phals" 3-1-2 fertilizer (not too heavy).
- ✓ to keep "phals" damp; watch for water in crowns at night—water early.
- ✓ to watch that "phals" do not become sunburned from the premature removal of shading material.
- ✓ to repot some yellow cattleyas; be selective.

ROSES Dr. Robert Linck

- ✓ to cleanup any debris, especially spent foliage, from around your rose bushes.
- ✓ to beware of hot, dry winds and protect roses with plenty of water.
- ✓ to give the bushes low-nitrogen food in late October to promote hardening.
- ✓ to visit rose gardens and look for new varieties. Make out rose order for fall delivery.
- ✓ to spray with malathion or sevin for budworm control.
- ✓ to begin preventive spraying with Parnon or Benlate for mildew control.

VEGETABLES George James

- ✓ to plant those vegetables that grow well when days are short and nights cool—such as beets, carrots, kohlrabi, garden peas, lettuce, radish, rutabaga, and spinach.
- ✓ to thin seedlings of these, as directed by instructions on seed packet, so that remaining plants develop to their greatest potential.
- ✓ to set plants of broccoli, cabbage, cauliflower, Brussels sprouts, chard, kale, lettuce, all of which will be available at nurseries.
- ✓ to take a chance and plant seeds of bush beans, either green or yellow wax, which need 60 days to reach bearing size. If planted in a warm location and the weather is normal, there is a good chance that enough beans can be harvested to pay for the trouble of planting and raising.

GREEN THUMB ITEMS Hazel Knack

- ✓ to lift tubers of tuberous begonias when foliage is dried.
Store in cool place.
- ✓ to place most fall planting bulbs in a refrigerator to chill (October) until planting time in November and December.
- ✓ to mulch acid loving plants using peat moss or ground bark.
- ✓ to divide Shasta daisies and transplant belladonna lilies after blooming.
- ✓ to keep mums staked, but do not pinch back any more.
- ✓ to fertilize mums until color shows.
- ✓ to feed lawns and sow bare patches. Can start new cool-season lawns.
- ✓ to plant perennials for spring color.
- ✓ to plant winter sweetpeas.
- ✓ to plant daffodils, watsonias, scillas, and jonquils in October.

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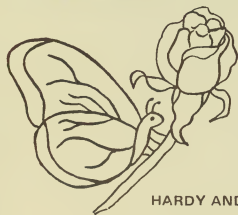
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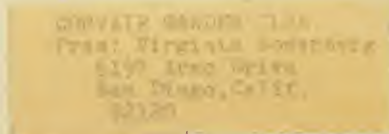
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SECOND CLASS POSTAGE PAID AT SAN DIEGO



Beauty and the Beasts III

THE SAN DIEGO FLORAL ASSOCIATION
sponsors the third annual Flower Show
"Beauty and the Beasts"

at

Wild Animal Park, San Pasqual
Saturday, October 7th and Sunday, October 8th
10:00 a.m. to 4:00 p.m.

More than fifty
Garden Clubs
Plant Societies
Nurseries
will enter exhibits in
"Beauty and the Beasts III"

Do plan to attend!

You will find it an extraordinarily gratifying experience

Mr. Jim Gibbons
Park Horticulturist
will have on sale many interesting, rare, and unusual plants :
succulents, trees, cacti, shrubs, ferns, and staghorns

San Diego Wild Animal Park